

Space Weather Products Familiarization

OL-A, 18th Weather
Squadron

Updated 30 Jan 03

Space Weather Info

In addition to terrestrial weather, space weather plays a key role in the warfighters' ability to plan and conduct operations. Unlike terrestrial weather requirements, the operational needs of the warfighter (as they pertain to space weather) are not well documented, and may not be as well understood. To that end, the Air Force Weather Agency has taken many steps to provide products and training to better understand space weather and its potential effects on operations. Everything from GPS readings to HF communications and SATCOM may be effected during high solar activity.

This will be a quick overview of the products OL-A, 18th WS, will provide on a routine basis. This overview will also include URL links to more in depth training material and available products currently in use to support the warfighters. Specialized space weather support can be provided on request.

**Space Weather is now provided on the new DIB
Blocks 15 and 16.**

PART II - ENROUTE & MISSION DATA													
14. FLT LEVEL/WINDS/TEMP			<input type="checkbox"/> SEE ATTACHED		15. SPACE WEATHER			16. SOLAR/ LUNAR		LOCATION			
						NO IMPACT	MARGINAL	SEVERE	BMNT	Z			
					FREQ				SR	Z		MR	Z
					GPS				SS	Z		MS	Z
					RAD				EENT	Z		ILLUM	%
17. CLOUDS AT FLT LEVEL					18. OBSCURATIONS AT FLT LEVEL RESTRICTING VISIBILITY								
<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	<input type="checkbox"/>	IN AND OUT	<input type="checkbox"/>	YES	<input type="checkbox"/>	NO	TYPE			

**Space Weather is also provided on the Mission
Forecast (MEF) in the Solar and Lunar Data b**

Solar and Lunar Data				
SR: 03/0713L	SS: 03/1732L	MR: 03/0848L	MS: 03/1951L	3%
Space Wx Impact	Low=L Moderate=M Severe=S		Freqs: L	GPS: L
Flight Weather Debrief				
Use this block to enter the Weather Debrief for the Weather Station				

Space Weather Info

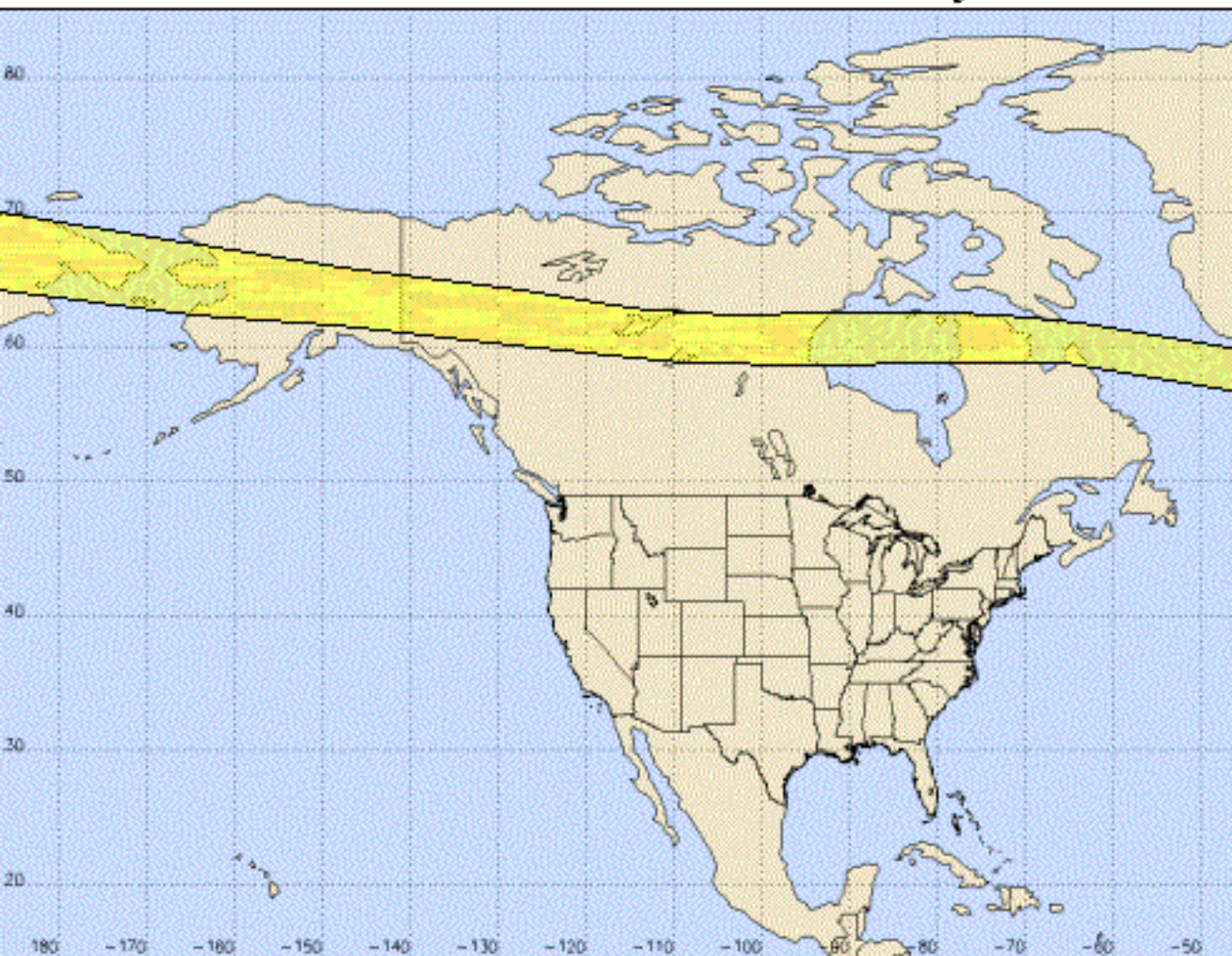
At this time we currently provide space weather information on the effects of solar activity on the radio propagation of HF signals, effects on GPS and other satellite navigation systems, and effects on power systems. SATCOM (GPS, etc.) and HF Communications (frequency) data used for these new blocks comes from products provided by the Space Weather Prediction Center (SWPC). These products may be obtained from AFWA's web site, or by clicking on the MEF link on our Aircrew Page and selecting Daily Space Weather Impact Graphics.

The following 3 slides will show you examples of the products provided by SWPC. For detailed information on these products and additional information on Space Weather training please download and read the Space Weather primer, which describes these products in detail, located at

<http://weathers.belvoir.army.mil/aircrew/Primer.doc>

Ionospheric Conditions Impacting High Frequency (HF) Communications and Other HF Operations

Forecast Valid: 03/1200Z - 03/1800Z February 03



These regions represent
conditions that can cause
marginal HF operations

These regions represent
disturbed conditions that can
severely degrade HF
operations

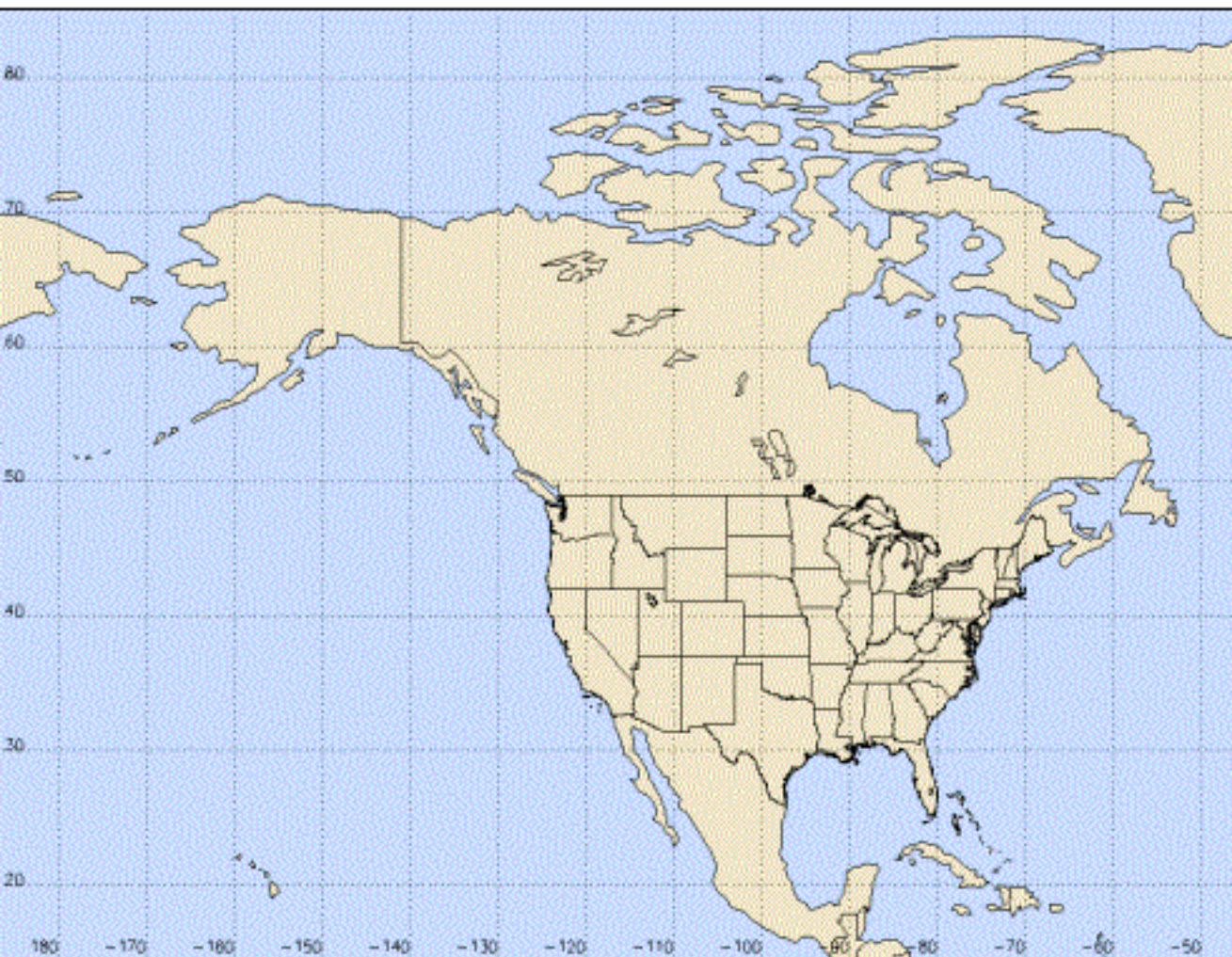
Press the HF Communications
“Help” key on the JAAWIN Space
Weather menu for assistance.

For additional
information/feedback please
call AFWA/XOGX at
Comm. (402) 232-8087
DSN 272-8087

Additional Comments:

Ionospheric Conditions Impacting UHF SATCOM Operations

Forecast Valid: 03/1200Z - 03/1800Z February 03



These regions represent conditions that can cause marginal UHF operations

These regions represent disturbed conditions that can severely degrade UHF operations

Press the UHF Communications "Help" key on the JAAWIN Space Weather menu for assistance.

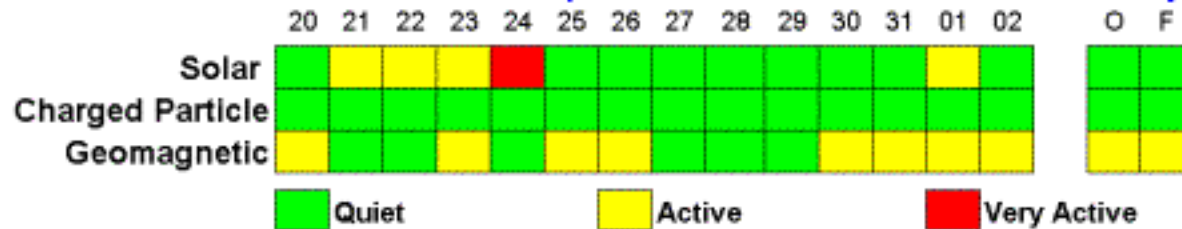
For additional information/feedback please call AFWA/XOGX at Comm. (402) 232-8087 DSN 272-8087

Additional Comments: No significant space weather disturbances expected to affect UHF or satellite communications.

Space Environment Global Situational Awareness

Valid: 03/1200Z Feb 03

Observed Space Environmental EVENTS

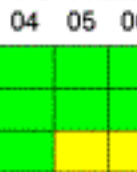


Today



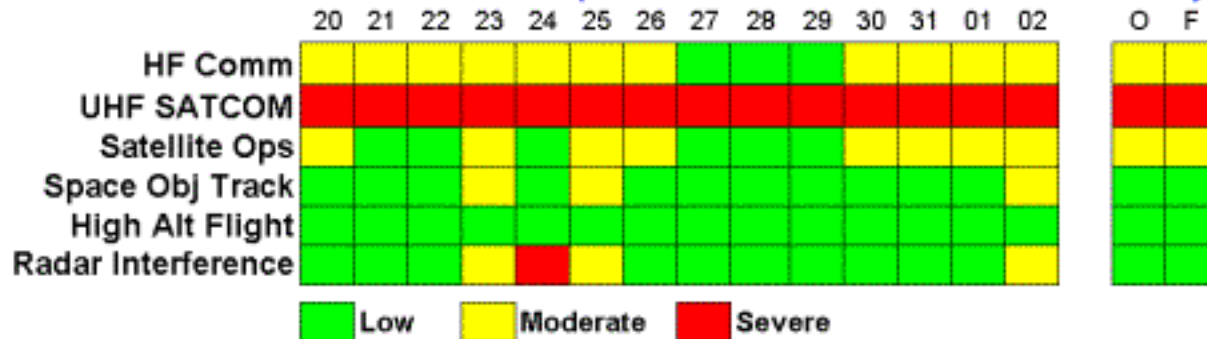
3 - Day

Forecast



See Discussion
and Events Slide
for Details

Probable Space Environmental IMPACTS



Today



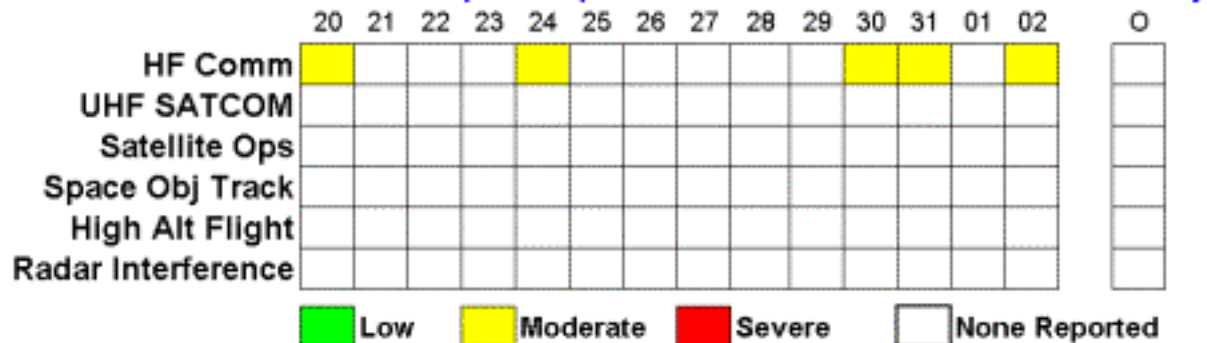
3 - Day

Forecast

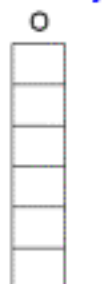


See Discussion and
Impacts Slide for Details
Check regional products
for specific details in your
AOR

Reported Space Environmental IMPACTS

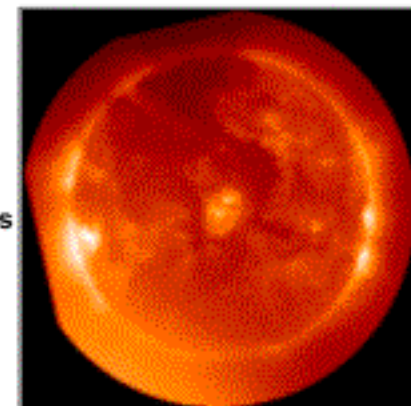


Today



See Impacts
Slide for Details

Image Valid 03/1135Z



Crane/Lankford
Issued 03/1200Z

Space Weather Info

Additional Space Weather Links

Space Weather Training and Requirements Module

(used for additional training and to help you determine if you have space weather requirements. This is where it all starts)

<https://midway.peterson.af.mil/weather/module.html>

Air Force Weather Agency Training Division

(This site covers all Air Force Weather training, but includes a good section on space weather.)

https://wwwmil.offutt.af.mil/afwadnt/Training_Products/Space%20Weather/space_weather.htm

Joint Air Force & Army Weather Information Network

(Main AFWA Space Weather page. Provides products, familiarization/training material, and links to other pertinent space weather sites.)

<https://www.afwin.afwa.af.mil/space.html>

What can you do to help us?



Online FEEDBACK Form